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3764

Tam Nguyen

(to be used for all correspondence after initial filing) Total Number of Pages in This Submission

Attorney Docket Number

Examiner Name

ENCLOSURES (Check all that apply)			
Fee Transmittal Form	Drawing(s)	After	Allowance Communication to TC
Fee Attached	Licensing-related Papers		al Communication to Board peals and Interferences
Amendment/Reply After Final Affidavits/declaration(s) Extension of Time Request Express Abandonment Request Information Disclosure Statement	Petition Petition to Convert to a Provisional Application Power of Attorney, Revocation Change of Correspondence Address Terminal Disclaimer Request for Refund CD, Number of CD(s) Landscape Table on CD	Propi	al Communication to TC eal Notice, Brief, Reply Brief) rietary Information s Letter r Enclosure(s) (please Identify y):
Certified Copy of Priority Document(s) Reply to Missing Parts/ Incomplete Application Reply to Missing Parts under 37 CFR 1.52 or 1.53	Remarks APPEAL BRIEF		
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Signature Signature	& Pannes		
Printed name William E. James	/ mas		
Date Dec. 17, 2008	Reg. No.		
CERTIFICATE OF TRANSMISSION/MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:			
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Typed or printed name William E. Jame	1001	Date	Dec. 17, 2008

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant:

William E. James

Examiner:

Tam Nguyen

Application No.:

09/674,996

Art Unit:

3764

Filing Date:

Nov. 2, 2000

Confirmation No.:

1327

Title: Automatically Variable Stride Walk-Run-Stepper Pedal Exerciser

APPEAL BRIEF

(under 37 CFR 41.37)

Mail Stop Appeal Brief -Patents

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Dear Sirs:

This Appeal Brief follows appellant's Notice of Appeal of Nov. 7, 2008.and responds to Office Action of Nov. 16, 2007 (to which appellant had filed a Reply Brief under 37CFR 41.41, Jan. 12, 2008 and subsequently received "Improper Reply" Notice of Sept. 25, 2008).

The Office Action, Nov. 16, 2007 responded to appellant's Appeal Brief of June 12, 2007.

I hereby certify that this correspondence is being deposited with the U. S. Postal Service as first class mail in an envelope addressed to the

above address on: Dec. 17, 2008

- 1. Real Party in Interest: William E. James
- 2. Related Appeals and Interferences: Appeal Brief of Mar. 21, 07, corrected version June 12, 07.

3. Status of Claims:

Claims 1 - 21 are canceled;

All of the following claims are being appealed:

Claims 22, 23, 26, 27, 36 and 37 are rejected;

Claims 24, 25, 28 - 35, 38 - 41* are withdrawn as subject to restriction.

*Note: Claim 41 is a second independent claim and has not received any detailed Action comment.

4. Status of Amendments:

Appellant's Amendment filed Apr. 30, 2004 (originally sent Feb. 26, 2004 then revised per format requirements of Advisory, Apr. 20, 2004) was not entered per Advisory Action, Oct. 4, 2004.

Appellant filed a Petition to the Director, Jan. 18, 2005, re: Errors in Final Action. This was dismissed, Jun. 21, 2006 as a "matter for appeal".

Appellant filed an Appeal Brief, June 12, 2007 to which the examiner responded with Office Action of Nov. 16, 2007 with a new ground of rejection (Amendment of Apr. 30, 2004 still not entered).

5. Summary of Claimed Subject Matter:

Independent Claims 22 and 41:

The invention is a new type of stationary pedal exerciser intended to fill a gap between prior art pedal exercisers - which do not allow realistic, normal variable stride walk-run-jog action - and the typical treadmill, which does. Prior art pedal devices, as outlined in the Specification (pgs. 2 - 5) are incapable of realistic, normal walk-run-jog stepping type strides (with essentially all the user's weight on the stepped down, striding foot) - especially with variable stride lengths as on a treadmill - because: 1) they do not return the pedal (if providing variable stroke) to a constant forward position for step down (necessary for continual in-place normal walking, running) and 2) they do not return the pedal to a forward position at the end of each stride independently of stride (prior, next, or any stride). Instead, they have dependent action, with the returning pedal always moving a distance equal to the rearward stroke of the opposite pedal as in a typical "strider" exerciser where the user must stay at a centered position and swing his feet, always equally weighted on the pedals, in equal and opposite directions about the center. Attempts have been made at variable strokes with crank-controlled motion and also reciprocating pedals clamping and releasing moving drive belts, but these still do not provide a constant forward position and do not have independence of return (from varying rearward positions) that is necessary to maintain a constant forward step-down position. With a varying forward position a user would have to move his position with each change of stride, trying to play "hop scotch" with the varying forward position or maintain more or less equal weight on the two pedals as on a "strider". It is obvious to one who has walked or run on treadmills and tried "striders" and other pedal devices that the realistic walking action as on a treadmill is not possible on a "strider" or any other prior art pedal type exerciser. These type devices have been cited in Office Actions.

Claim 22: The invention per claim 22 embodies (claim 22, ln. 4): "...a substantially constant forward step-down position...", (ln. 6:) "...primarily back and forth strokes variable rearwardly from said forward step-down position ..." and (ln. 8:) "...means for returning said foot pedals to said forward step-down position at the end of each stride independently of stride length." This independence of return from stride or stroke and the constant forward step-down position it enables is essential for a pedal device to support variable normal walk-run-jog strides from stride to stride as described in the Specification (pg. 4, ln. 8 -37).

See next page, "seven versions of the invention", for references to described structure in Specification

Claim 41: The invention per claim 41 provides (claim 41, ln.3): "...a forward step-down position," (ln. 4:) " primarily back and forth strokes variable rearward from said step-down position and " (ln. 6:) "...means returning said foot pedals to said forward step-down position at the end of each stride at velocities substantially greater than stride velocity." It is essential for varying stride length from stride to stride that the returning pedal can return faster than stride velocity, especially going from a long stride to a

5. Summary of Claimed Subject Matter (cont'd.):

shorter one - so there will be a pedal returned from the long stride to the forward step-down position to step on - to end the shorter stride occurring during the (opposite) longer return. With pedal return not dependent on or limited to motion or velocity of the opposite (striding) pedal, velocity of return can be greater than stride velocity, dependent only on mass and friction drag of the pedal and the "return means" force applied. In the extreme case of no concurrent stride or zero velocity of the stepped -on pedal, the return velocity of the opposite pedal would be infinitely greater than stride velocity. (See "seven versions of the invention" below for reference to structure in the Specification.)

All <u>seven versions of the invention</u> fulfill the limitations of <u>claims 22</u> and <u>41</u>. The "means for returning" as claimed is described in the Specification for the seven versions of the invention as follows: (This is intended to avoid much repetition, since twenty claims relate to seven versions.):

Version A: (pg. 12-14; Figs. 1-3) A linkage train (pg. 13, ln. 4) comprising Link 20, Lever 22, Link 26, Bellcrank 28 and Link 30 connect downward motion (only) of Left Trackbar 13 and thus, Left Pedal 17 with Right Pedal 16 forward motion. Thus, a relatively small downward displacement of Pedal 17, supported by Spring Damper 15 (pg. 12, ln. 15), under a user's weight at step-down causes a much longer move of the Right Pedal 16 forward. Likewise, a similar linkage train is shown for returning Left Pedal 17 forward in response to step-down on Right Pedal 16. The resultant action is described on pg. 15, ln. 1-37 of the Specification. The pedal just ending a stride will quickly return to the forward position regardless of stride length, even without any following stride, simply by the user's ending the stride by stepping on the opposite, forward pedal. Then, the following stride can vary from zero to as long as the machine will allow, since the other (just returned) pedal will be at the constant forward step-down position very soon after the end of the last stride.

All seven versions of the invention operate in essentially the same manner, "end of stride" or step-down of the forward foot on the forward pedal and lifting of the rear foot at the rear pedal causing the rear pedal to return to the constant forward step-down position.

<u>Version B</u>: (pg. 18, ln.21 thru pg. 19; Figs. 4 - 5) Pneumatic cylinders 38, 39 and 42, 43 and tubing 44, 45 are employed in master-slave fashion (39 to 42) to connect the short downward displacement of one pedal (17) at step-down to cause a much longer and faster return forward of the opposite, rear pedal (16) and vice versa (step-down on 16 causes 17 to return).

5. Summary of Claimed Subject Matter (cont'd.)

<u>Version B-2</u>: (pg. 20, ln. 1 - 33; Fig. 7) This is an externally powered pneumatic return version not listed in the Office Action, Oct. 30, 2002 species list. A Cylinder 43 returns Pedal 17 when opposite Pedal 16 is stepped on, switching on air pressure from an external source via Limit Valve 46 and vice versa. Very little downward displacement of the forward pedal is required. A small motor-compressor could be part of the machine to provide compressed air

<u>Version C</u>: (pg. 20, ln. 34 - pg. 26, ln. 18; Figs. 9 - 13) Here an electric Motor 69 drives each pedal rearward during its weighted stride stroke. A Spring 67, compressed by the motor drive through Drive Wheel 73 driving Pedal 16 rearward returns Pedal 16 forward upon lifting of the foot, releasing the pedal from Drive Wheel 73 as Spring Damper 14 raises Pedal 16 as in version 'A' back up to its unloaded level.

<u>Version D</u>: (pg. 26, ln. 19 - pg. 28, ln. 33; Figs. 14 - 16) This user- powered version employs a Flywheel/Resistor 96 to regulate pedal stride motion. Weighted Pedal 16 is pushed rearward, aided by gravity if the machine is inclined, driving the flywheel/resistor through Drive Wheel 91 and extending Band Spring 98 which returns the pedal forward when the pedal is unweighted at end of stride.

<u>Version E</u>: (pg. 29, ln. 8 - pg.34, ln. 18; Figs. 17 - 20) This pneumatic user- powered version employs an Air Bag 116, 117 under each Pedal 16, 17 to cushion each step and pump air to an Air Tank 120 for use in propelling pedal return strokes. Long Bellows 118, 119 act as light weight, long stroke cylinders to push each corresponding Pedal 16, 17 forward as it is unweighted. Air Bag 116 is unpressurized as Pedal 16 is unweighted as in Fig. 19 which causes Pilot Valve 123 to duct return air pressure to Pedal 16 Bellows 118. This system allows using pedal deceleration energy as each Pedal 16, 17 is stopped at the forward position by corresponding Stop Bellows 131, 132. These pump compressed air to the Air Tank 120, thus recuperating pedal return velocity energy for the next return. This would allow faster returns with less step-down displacement and thus, faster (running) strides. Other sources of compressed air energy may include Arm (exercise) Levers 135 as shown in Fig.20 (pg. 33, ln.37).

<u>Version E-2</u>: (pg. 34, ln. 19 - pg. 35, ln. 16; Fig. 22) This is a powered pneumatic version where motor driven Pump 140 pressurizes Air Tank 120 for pedal return and acts to power and regulate rearward (stride) speed. This is accomplished by Pilot Valves 123, 124 controlled by pressure rise in Air Bags 116,117, sensing step-down to power or drive the same Pedal (16 for 116 and 123) rearward and pressure drop or lifting of the foot to return the Pedal. Also shown is a Motor 69 Speed Control 84 which varies pedal speeds in response to rearward force of the user's foot on the pedal.

Note: The following dependent claims' summaries also reference one or more of the above version tie-in descriptions to the Specification.

5. Summary of Claimed Subject Matter (cont'd.):

Dependent Claims Argued Separately: (all dependent on Claim 22 unless as noted)

Claim 23: "...means for returning returns .. pedals to said forward step-down position using step-down

energy."

This is shown in Version A as described above (pg. 4) where the linkage train causes step-down force

and displacement of one pedal to return the opposite pedal, in Version B where the master-slave pneumatic

cylinders accomplish the same result (and adds cushioning of step-down), and Version E with the Air Tank

120 accumulating step-down produced air pressure energy used for pedal return.

Claim 24: "... arresting means, energy conversion means and energy storage means to recuperate energy of

returning said foot pedals."

Versions E and E-2 (above, pg. 5) have Stop Bellows 131, 132 which convert pedal return velocity

energy while stopping the pedal at the forward position into compressed air in Air Tank 120, recuperating

energy to be used for pedal return.

Claim 25: "... power and control means connecting the downward force and deflection of a forward one of

said pedals to the rearward one of said pedals to propel said rearward pedal forward."

Version B-2 (pg. 5) is the simplest example of this with an external source of compressed air power

being controlled by limit valves upon downward deflection of one pedal to return the opposite pedal.

Versions E and E-2 similarly have separate pilot valves to control compressed air power to actuate pedal

return in response to step-down on the opposite pedal.

Claim 26: "...means for returning includes fluid means."

This is shown in Versions B, B-2, E and E-2, the fluid being air.

Claim 27: "...means for returning comprises spring means."

This is shown in Versions C and D.

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5. Summary of Claimed Subject Matter (cont'd.):

Claim 28: "...further including speed regulating means to control rearward motion of said foot pedals."

This is shown in Version A, with the striding pedal's (16) rearward motion connected to the opposite pedal's (17) upward motion (inverse of pedal 16 return forward being connected to pedal 17 downward motion) which is regulated by Spring Damper 15 as described in the Specification (pg. 16, ln. 24 - 33). All Versions show speed regulation of some kind, by drive wheel under the pedal in Versions C and D, and by fluid flow resistance in Versions B, E, and E-2, while C and E-2 have motor drive regulation.

Claim 29: "...according to claim 28...regulating means comprises spring and damper means."

This is shown in Version A as described for claim 28.

Claim 30: "...according to claim 28...regulating means comprises rotary resistance means."

This is shown in Version D.

Claim 31: "... according to claim 22...motorized speed regulating means."

This is shown in Versions C and E-2.

Claim 32: "... according to claim 31 ... regulating means comprises frictional drive means..."

This is shown in Version C where Drive Wheels 73, 74 drive Pedals 16, 17 and also in Version D.

Claim 33: "... according to claim 31 ... regulating means comprises fluid pumping means ..."

This is shown in Versions E and E-2.

<u>Claim 34</u>: "... according to claim 31 ...sensor means to sense the user's foot force rearward or forward on said foot pedal ... to vary the speed of said motorized means in response to said foot force."

This is shown in Version C (Fig. 13; Specification: pg. 24, ln. 27 - pg. 26, ln. 18) and in Version E-2 (Fig. 22; Specification: pg. 34, ln. 19 - pg. 35, ln. 16).

<u>Claim 35</u>: "... according to claim 22 ... including braking means to brake forward motion of said foot pedal when said user is standing on said pedal."

This is shown in Version C (Fig. 12; Specification: pg. 23, ln.31 - pg. 24, ln. 26)

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5. Summary of Claimed Subject Matter (cont'd.):

<u>Claim 36</u>: "... according to claim 22 ...including cushion means integral with said foot pedals or said support means to cushion the user's step-down..."

This is shown in all versions but is especially visible in Version B (Fig. 4 & 5; Specification: pg. 18, ln. 21 - pg.19, ln. 34).

Claim 37: "... according to claim 22 ... means for returning employs stride energy."

This is shown in Version D where stride extends Band Spring 98 for pedal 16 which then returns the pedal at end of stride (Fig. 15; Specification; pg. 27, ln. 34 - pg. 28, ln. 15).

Claim 38: "...claim 22 wherein said means for returning employs energy sources external to a user."

This is shown in Version B - 2 (Fig. 7; Specification; pg. 20, ln. 1 - 33).

Claim 39: "... of claim 38 wherein said external energy sources include fluid power means."

This also is shown in Version B - 2 as above, claim 38.

<u>Claim 40</u>: "The exerciser of claim 22 wherein said means for returning employs stored energy from a plurality of sources."

This is shown in Version E (Fig. 20; Specification: pg. 33, ln. 37 - pg. 34, ln. 10).

6. Grounds of Rejection to be Reviewed on Appeal:

Please review:

a) Rejection under 35 USC 112, 1st. Par.: (claims 22, 23, 26, 27, 36 and 37)

Claims 22, 23, 26, 27, 36 and 37 stand rejected under 35 USC 112, 1st. Par. as being inadequately described in the Specification. (for evidence relied on see Application Specification and Drawings, Argument, pg. 10 & Evidence Appendix)

b) Requirement for restriction and withdrawal: (claims 24, 25, 28 - 35, and 38 - 41)

Claims 24, 25, 28 - 35, and 38 - 40 stand subject to restriction (due to rejection of claim 22) (For evidence relied on see Application Specification and Drawings, Argument, pg. 12 & Evidence Appendix)

Claim 41 is an independent claim similar to claim 22 and has received no Office Action commentary.

7. Argument:

a) Rejection under 35 USC 112, 1st Par.: (Claims on appeal: 22, 23, 26, 27, 36 and 37)

Evidence relied on: Appellant's Application Specification and Drawings.

The examiner (Office Action, Nov. 16, 07) does not state to which particular version or species he refers nor by page, line or figure, but since he refers to: "air in the cylinders" (his pg. 3, ln. 2), appellant assumes it is in reference to Species B or Version B (pg. 4 herein). This version is described in the Specification (Figs. 4 - 6)on page 18, ln. 21 (pages as originally submitted by appellant) and is a pneumatic, user-powered version.

The Specification description, starting pg. 18, ln. 35, is simple and straight forward (key words underlined for emphasis): "A Right Track Bar Cylinder 38 (note that this is a vertical cylinder responding to step-down force only on the Right Pedal 16) ... containing a Right Support Spring 40 supports a Right Track Bar 12 and a corresponding Right Pedal 16 and provides pressurized air through a Right to Left Tubing 44 to a Left Return Cylinder 43 which pushes Left Pedal 17 forward as Right Pedal 16 is pushed downward." Continuing on pg. 19, In. 1, it is explained similarly how Left Track Bar Cylinder 39 (responding to step down on the Left Pedal 17) is linked through Left to Right Tubing 45 to Right Return Cylinder 42 to push Right Pedal 16 forward as Left Pedal 17 is pushed downward. In Fig. 4 it can be seen that, as described, Tubing 44 connects the output end of Right Track Bar Cylinder 38 (or the Right Pedal "step-down cylinder") to the Left Return Cylinder 43 to return the Left Pedal 17 as the Right Pedal 16 is pushed downward at step-down on the Right Pedal. Likewise, Tubing 45 can be seen to connect the Left Track Bar Cylinder 39 to the Right Return Cylinder 42 to push Right Pedal 16 forward as the Left Pedal 17 is pushed downward upon step-down on same. In Fig. 4 the two Tubes 44 and 45, with air flow arrows, are shown clearly to connect the vertical (step-down) cylinder of one Pedal to the rear of the opposite Pedal's Return Cylinder, the Tubes crossing over each other at the rear (left side of drawing) of the exerciser so that step-down on either pedal will cause the return of the opposite.

From the above, it is obvious that pedal return is dependent only on <u>step-down</u> on the opposite pedal (end of stride) and is <u>independent of stride</u> or length of travel of the opposite pedal (or any pedal) as recited in Claim 22, there being no operating connection between the two return cylinders 42 and 43.

In contrast to the above description from the Specification, the Examiner states (Office Action, Nov. 16, 07, pg. 3, ln.4): "In other words, as one pedal moves backwards, the other moves forward at the same rate and thus distance." Also, (pg. 3, ln. 8): "...it is not clear to the examiner which components of the invention allow for a first foot pedal to return to the step-down position at the end of each stride independently of stride length of the second foot pedal."

Argument (continued):

The examiner's interpretation is patently wrong. In the Specification and drawings, as outlined above, no operating connection whatsoever is described or shown between the pedals (in any of the seven versions-see below) that would cause one pedal to move forward as the opposite pedal moves rearward at the same rate or any rate.

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It was explained early (pg. 4) in the Specification, in fact, that (ln. 28): "...machines directly connecting the pedals for equal and opposite back and forth motion do not provide realistic, normal walk-run action with variable length strides." The first four pages of the Specification outline and explain "the problem" in the field of pedal type exercisers, their inability to provide variable stride normal walk-run action, and that the problem is a result of the typical equal and opposite (dependent) pedal connection and action. Then, on page 5 the invention's objectives are summarized, especially line 16: "to provide a walk-run reciprocating pedal exercise machine in which the return of each pedal forward to the step-down position from varying stride lengths is initiated and caused by the user's front foot step-down and accompanying opposite foot lift-off action, these two essentially concurrent actions always marking each end of stride." Appellant then went on to describe fully seven versions of the invention in detail (listed above (pgs. 4 - 5) with short descriptions, each paraphrasing a referenced section of the Specification). All seven versions were designed to meet the above stated objective and are described with drawings to show that pedal return is dependent only on "end of stride" and is independent of stride

<u>Claim 22</u>: As explained above it is obvious that pedal return is dependent only on <u>step-down</u> on the opposite pedal (and concurrent lifting of the foot on the pedal about to return) or <u>end of stride</u> and is <u>independent of stride</u> or travel of the opposite pedal (or any pedal) as recited in Claim 22, there being no connection between the two (horizontal) Return Cylinders 42 and 43. All seven versions as described in the Specification and above (p. 4) meet the requirements of claim 22.

<u>Claims 23, 26, 27, 36 and 37</u>, all dependent on claim 22, relate to the various versions of the invention as described above, section 5, Summary of Claimed Subject Matter (p. 3 - 8), each of the claims being supported by structure as described for one or more of the seven versions as outlined starting on pg. 6, section 5.

Argument (continued):

b) Restriction and Withdrawal of Claims: (Claims on appeal: 24, 25, 28 - 35 and 38 - 41)

Evidence relied on: Appellant's Specification and Drawings and Appeal Brief, June 12, 2007.

<u>Claims 24, 25, 28 - 35 and 38 - 40</u> were withdrawn as having no generic claim. These claims are dependent on claim 22 primarily or secondarily. Appellant believes claim 22 is allowable as argued above and is generic to all versions of the invention as described. Claims 24, 25, 28 - 35 and 38 - 40 all describe further ramifications of the device as claimed in claim 22, each of the claims being supported by structure as described for the seven versions of the invention above in section 5 (independent claims starting pg. 6).

<u>Claim 41</u> is an independent claim and has received no Action commentary. As explained above, pg. 3, all versions of the invention exhibit return of a pedal upon step-down on the opposite pedal, with return not limited to stride motion or velocity of the opposite pedal. Therefore, all seven versions structurally support this claim (see p. 3): "... returning ...pedals at velocities substantially greater than stride velocity."

Argument (continued(:

Each of the <u>seven versions</u> of the invention accomplishes the pedal return "...at end of stride independently of stride..." as recited in claim 22 and claim 41 by somewhat different means as follows:

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- Version A has a direct mechanical connection tying the downward motion (only) of the stepped on (front) pedal to a return motion (forward) of the opposite (rear) pedal.

Version B (above described in contrast to the examiner's interpretation) has a direct pneumatic (master
 slave cylinder) connection, acting essentially the same as version A.

- Version B-2 employs an external compressed air source with "limit valves" operated by the pedals' downward movement to valve air to the opposite pedal's return cylinder as the forward pedal is stepped on.
- Version C has a return spring under each pedal that is compressed during the stride (pedal moving rearward) by a motor so that the spring returns the (same) pedal forward when the rearward striding foot ends the stride and lifts, the motor drive disengaging the pedal
- Version D also has a return spring, but no motor, the user's foot force rearward during the stride, aided by flywheel momentum, extending the spring, which then returns the (same) pedal at foot lift-off or "end of stride".
- Version E has a motor-driven air pump providing pressurized air controlled by pilot valves (air pressure sensing) responding to step-down and lifting of the foot so that each pedal is allowed to move rearward (stride) in response to step-down on that pedal and is returned forward in response to lifting the foot.
- Version E-2 also has a motor-driven air pump and pilot valves to not only return the pedal upon foot lifting, but also power rearward (stride) motion upon step-down on the pedal.

All seven versions produce essentially the same result: at "end of stride", that is, step-down of the forward foot on the front pedal and/or lifting of the rearward foot at the rear pedal, the rear pedal returns to the forward step-down position independently of stride and at velocities substantially greater than stride velocity.

All of this shows that appellant has provided a complete and clear description of the construction and operation of the invention, going beyond the norm to describe a wide variety of designs or arrangements that accomplish the stated objectives and all of which fully meet the independent claims 22 and 41. As argued above, appellant believes dependent claims 23 - 40 are valid claims as further variations of the means recited in claim 22, each being supported by structure in one or more of the versions as above, pg. 6..

8. Claims Appendix:

22. A reciprocating foot pedal exerciser for stepping, walking, jogging and running in place, enabling automatically variable length strides, comprising:

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foot pedals for receiving user foot action at a substantially constant forward step-down position on the exerciser;

support means for guiding said foot pedals in primarily back and forth strokes variable rearward from said forward step-down position and

means for returning said foot pedals to said forward step-down position at the end of each stride independently of stride length.

- 23. The exerciser of claim 22 wherein said means for returning returns the rearmost one of said foot pedals to said forward step-down position using step-down energy.
- 24. The exerciser of claim 22 having arresting means, energy conversion means and energy storage means to recuperate energy of returning said foot pedals.
- 25. The exerciser according to claim 22 further including power and control means connecting the downward force and deflection of a forward one of said pedals to the rearward one of said pedals to propel said rearward pedal forward.
- 26. The exerciser in accordance with claim 22 wherein said means for returning includes fluid means.
- 27. The exerciser in accordance with claim 22 wherein said means for returning comprises spring means.
- 28. The exerciser according to claim 22 further including speed regulating means to control rearward motion of said foot pedals.
- 29. The exerciser according to claim 28 wherein said regulating means comprises spring and damper means.
- 30. The exerciser according to claim 28 wherein said regulating means comprises rotary resistance means.
- 31. The exerciser according to claim 22 further including motorized speed regulating means to control rearward motion of said foot pedals.
- 32. The exerciser according to claim 31 wherein said regulating means comprises frictional drive means interconnecting said motorized means and said foot pedals.

8. Claims Appendix (continued):

33. The exerciser according to claim 31 wherein said regulating means comprises fluid pumping means interconnecting said motorized means and said foot pedals.

34. The exerciser according to claim 31 further comprising:

sensor means to sense the user's foot force rearward or forward on said foot pedal and;
control means to receive a signal from said sensor means and to vary the speed of said motorized
speed regulating means in response to said foot force.

- 35. The exerciser according to claim 22 further including foot pedal braking means to brake forward motion of said foot pedal when said user is standing on said foot pedal.
- 36 The exerciser according to claim 22 further including cushion means integral with said foot pedals or said support means to cushion the user's step-down on said foot pedal.
- 37. The exerciser according to claim 22 wherein said means for returning employs stride energy.
- 38. The exerciser of claim 22 wherein said means for returning employs energy sources external to a user.
- 39. The exerciser of claim 38 wherein said external energy sources include fluid power means.
- 40 The exerciser of claim 22 wherein said means for returning employs stored energy from a plurality of sources.
- 41. A reciprocating foot pedal exerciser for walking, jogging, running and stepping in place enabling automatically variable length strides, comprising:

foot pedals for receiving user foot action at a forward step-down position;

support means for guiding said foot pedals in primarily back and forth strokes variable rearward from said step-down position and

means returning said foot pedals to said forward step-down position at the end of each stride at velocities substantially greater than stride velocity.

9. Evidence Appendix:

Evidence relied on:

- 1. Applicant's Application Background, Specification, and Drawings,
- 2. Applicant's Amendment of Apr.30, 2004 (not entered),
- 3. Appeal Brief of June 12, 2007,
- 4. Office Action of Nov. 16, 2007.

10. Related Proceedings Appendix:

- 1. Appellant's Appeal Brief, June 12, 2007,
- 2. Office Action, Nov. 16, 2007.

Appellant has endeavored to provide all pertinent information and would sincerely appreciate the Board of Appeals' consideration and efforts to advance this Application which has suffered many delays. Appellant respectfully requests that his Amendment of Apr. 30, 2004 be entered and corrections and revisions therein and claims 22 through 41 be allowed either as herein or with revisions in the amendment (only more clarifying words were added in the preamble of claim 22 and a "whereby" clause at the end).

Respectfully submitted,

William E. James (appellant)

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